

Case Study

Native pastures support production & sustainability

The productivity and sustainability of native pastures on steep hilly grazing country in western Victoria could be improved with changed grazing practices, EverGraze Supporting Site host, Mark McKew, told Lucy Kealey.

"We established the EverGraze Supporting Site during 2007. We are still on the learning curve but it's looking good. Compared with the old set stocked system, the combination of late-start deferred grazing and rotational grazing has a lot of benefits.

The control paddock is set stocked with about 220 breeding ewes on just over 70 hectares — an average 4.0 dry sheep equivalent (DSE) per hectare.

Another area of over 100 hectares has been split into six smaller paddocks based on land class and aspect. The bare hill top and active erosion gullies have been fenced out and rehabilitated.

One of the 30 hectare small paddocks is the innovation paddock. Late start deferred grazing and rotational grazing have been applied in this paddock.

The first late-start deferred grazing of the innovation paddock was during spring 2008. Merinos intensively grazed the paddock during mid-late spring. The grazing was timed to minimise the growth of annual weed grasses and stop them going to seed. Stock were then removed to let the native grasses set seed.

The stocking rate in this paddock was high for two to three weeks, about 28 DSE/ha. It was pretty much crash grazed. We are trying to get the sheep to really hammer the annuals, such as silver grass. But there was still a fair amount of groundcover when I moved the sheep on, which is really important in the hilly country.

farm info.

Producer: Mark McKew

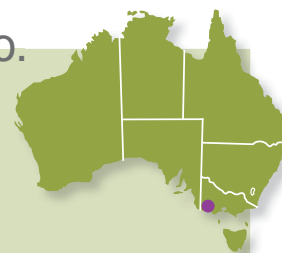
Location: Warrak, 15 km east of Ararat, Victoria

Property size: 600 ha

Soils: Sandy loam over weathered clays

Enterprises: fine wool and prime lamb production, cattle

Pastures: Phalaris and clover on improved land; native pasture in hill country (*danthonia, themeda, microleana, stipa* spp.)



Stock go back into the innovation paddock during February, or later, depending on seasonal conditions. This is only for a short spell to provide seed-soil contact for the newly-dropped native seed, hopefully promoting the germination of the natives during autumn.

The innovation paddock also is part of the rotational grazing system, used with the other five paddocks. Each paddock will have sheep in for about a week to 10 days, and then it is rested for five to six weeks, allowing the pasture to regrow.

I think the significant results of the trial will be seen in the long term. But we did some plant counts at the end of April and there was a slight increase in the number of natives in the innovation paddock compared with the control.

There was mainly wallaby, kangaroo weeping grass and stipa in the innovation paddock. I am really getting my eye in for native grasses with this EverGraze work!

The new grazing system makes a lot of sense when we are trying to run low-input native pastures on the hilly



Mark McKew examines his Supporting Site

key points

- Late-start deferred grazing during spring and strategic rotational grazing in the innovation paddock are being compared with set-stocking in a control paddock.
- The innovation site is showing improvement in the content of desirable perennial native species, maintained groundcover and pasture productivity.

“We trialled spraying out onion grass in the native pasture with metsulfuron methyl. The native grass survived quite well but the undesirables got sprayed right out”

country. Years ago superphosphate was spread by aeroplane on a regular basis but I can't imagine that happening again. Given the low rainfall for the past 10–15 years, which has averaged 370 millimetres per year, rather than up to 600 mm per year, most people have reduced their stocking numbers. So currently, I think we have the right stock numbers to work with this system, but if better seasons return, we will look to increase stocking rates. Even now we may ramp the system up, as we are easily maintaining greater than 90 per cent groundcover.

The other option that fits well with this grazing system is producing wethers for export, which during the past couple of years have been sold during February and

science behind the story

The objectives of the Warrak EverGraze Supporting Site were to increase perennial grasses, decrease non-productive annuals, maintain groundcover, better utilise feed and increase productivity.

The Warrak site has a good mix of perennial native grasses. Continuous grazing pressure has reduced the perennial nature of the pastures allowing unwanted species such as silver grass and onion grass to reduce productivity.

Recent work carried out in the Ararat Hills by DPI Victoria researcher, Dr Zhongnan Nie, indicated that late-start deferred grazing could be a useful tool to increase perennials in hill pastures. Unlike gentler country where herbicides or cropping can be used to modify pasture composition, strategic grazing has been used as the agent of change.

Applying this research at a paddock scale at the Warrak EverGraze site, late-start

September. The innovation paddock has shown we can improve the native pasture content and maintain our groundcover. I can see more paddocks doing the same.

The native perennials are persisting well in the innovation paddock and the other five paddocks in the rotation. In the rotationally-grazed cells the native pastures are pretty thick. The capeweed has all but disappeared. It's just the onion grass that is a problem.

The hill country works extremely well for Merino wethers. The sheep are clean, the wool is clean and the wool is hardly ever daggy. The wethers are

deferred grazing was the tool used in the 'innovation' paddock during spring 2008 to reduce seed set of annual species and encourage perennial seeding. In addition, the previous continuous grazing regime was permanently replaced with rotational grazing during December 2007, with the creation of six smaller paddocks and the installation of a reliable water supply using a solar pump.

An adjoining paddock of 70 ha was used for the 'control' paddock, where set stocking continued as previously. Results from regular monitoring show that the innovation paddock is well on the way to meeting the objectives.

There has been a marked increase in perennial coverage showing that the regular spelling is beneficial for the recovery of the perennials. Groundcover is maintained at 90% or



Measuring pasture with a rising plate meter

happy to eat the native pasture and with the rotational grazing, the paddock gets a chance to freshen up. You can really see the sheep take to it.

The other good thing about the native grasses is that they really respond to a summer rain. They green up and freshen up really quickly. They are fantastic in that respect.”

greater, eliminating the risk of soil erosion which previously occurred at the site.

In future the aim is to strategically increase stocking rates to better utilise the increased dry matter production in the innovation paddock to lift productivity. Significant onion grass infestation limits the effectiveness of the perennials as stock selectively graze these natives. Spraying of the innovation paddock for onion grass has occurred in winter 2010 in an effort to improve feed value and allow native grasses to further increase.

A series of fact sheets is available at www.evergraze.com.au

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